

A Preliminary List of Indiana Neuroptera.

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The first record of Neuroptera in Indiana appeared in the paper on North American Neuropterous Insects by Thomas Say, published posthumously in 1839,¹ in which *Formicaleo grata* was described from Indiana, although two species recorded from the Northwest Territory by Say in 1823² may have been taken within the state. Hagen quoted these records in 1861³ but the next direct record, and the only other one which we have been able to find did not appear until 1903,⁴ when K. C. Davis reported *Chauliodes rasticornis* Rambur from Sullivan.

When Professor Roger C. Smith of Kansas Agricultural College informed us recently that there were few published records of Neuroptera from this state, we sent him all the specimens of the order which we could find in the Purdue Collection or in the collections of Purdue entomologists. These specimens were determined by Professor Smith and were used in compiling the following list.

This list adds 27 species and varieties to the two species already known from Indiana. Many of these have long been known to be regional for the state and lack of records has been due to a lack of interest in the order by collectors working in Indiana. Professor Smith wrote, "There was nothing very surprising about the collection, except the *Dendrolcon*; I did not know that it extended so far east."

Specimens from Clark County were collected by students at the Purdue Forestry Camp in the Clark County State Forest at Henryville. Most of the specimens from Tippecanoe County were collected by students enrolled in entomology classes at Purdue University. In each case in which it is known, the name (or initials if one of the authors) of the collector is placed in parenthesis following the record of collection.

¹ Jr. Acad. Nat. Sci. Phil., 8: 9-46.

² Godman's Western Quart. Report., 2, (2):160.

³ Syn. Neur. N. Amer., Smithsonian Misc. Coll.

⁴ N. Y. St. Mus. Bull. 68: 442-486.

If a specimen is retained in the collection of the collector the name or initials of the collector are starred (*); all other specimens, except as indicated otherwise, are in the Purdue Collection.

All records without indication of the year are for the 1932 season. The arrangement within families is alphabetical by genera, species, and varieties, respectively.

SIALIDAE.

1. *CHAULIODES CONCOLOR* Davis. Clark Co., June 23, 1931; Tippecanoe Co., May 25 (in Coll. Roger C. Smith).

2. *C. PECTINICORNIS* Linn. Clark Co., July 27, at light; Tippecanoe Co., May 28 and June 2, 1923, May 18, 1931, "Purdue library," May 11, under street light (R. C. Kellar), May 20, at light.

3. *C. RASTICORNIS* Rambur. Sullivan Co., reported from Sullivan by Davis.⁴

4. *C. SERRICORNIS* Say. Tippecanoe Co., May 10, 1930 (R. R. Heaton).

5. *CORYDALIS CORNUTA* Linn. Cass Co., Logansport, June 24, 1916; Clark Co., July 12, 1930; Green Co., 1895; Knox Co., Vincennes, July 31, 1924 (B. E. M.); Parke Co., Turkey Run State Park, Aug., 1932 (F. H. Test. Determined by the authors); Tippecanoe Co., —, 1914, June 15, in wood, July 6, at light (B. E. M. in Coll. Roger C. Smith).

6. *NEOHERMES ANGUSTICOLLIS* Hagen. Clark Co., July 4, 1931.

7. *N. FILICORNIS* Banks. Clark Co., June 24, July 20, at light.

MANTISPIDAE.

8. *MANTISPA BRUNNEA* Say. Knox Co., Aug. 19, 1929, in syrup bait trap (W. P. Yetter, Jr., in Coll. B. E. M.).

HEMEROBIIDAE.

9. *HEMEROBIUS HUMULI* Linn. Tippecanoe Co., Apr. 12, 13 (G. B. Cummins) and 14, 1930, six specimens from Apr. 15 to May 21, 1931 (one each collected by L. I. Musgrave* and T. Harrison), some of these at light, Apr. 15, June 15; White Co., Freeman Lake, July 20 (E. M. Heiss. in Coll. B. E. M.).

10. *STIGMATERUS* Fitch. Tippecanoe Co., Apr. 6, sweeping weeds (C. Yarwood) and 10, 1930; May 21, in swamp (J. W. Ham).

11. *MICROMUS POSTICUS* Walker. Porter Co., Mineral Springs, Sept. 1, 1925, three specimens by sweeping vegeta-

tion in maple zone of tamarack swamp (B. E. M.*); Tippecanoe Co., Apr. 10, 1931, sweeping.

CHRYSOPIDAE.

12. *CHRYSOPA HARRISH* Fitch. Tippecanoe Co., June 2, 1926.

13. *C. OCVLATA* Say. Clark Co., July 4, 1931; St. Joseph Co., Aug. 22, sweeping ragweeds (A. W. T.); Tippecanoe Co., May 12, 1915, May 16 and 18, 1931, nine specimens from May 1 to 24, some of these at light, others by sweeping vegetation.

14. *C. OCVLATA* var. *ALBICORNIS* Fitch. Tippecanoe Co., May 25 and 30.

15. *C. OCVLATA* var. *BIPUNCTATA* Fitch. Tippecanoe Co., May 20, June 7, sweeping grass (A. W. T.), July 1 (B. E. M.).

16. *C. OCVLATA* var. *CAREI* Smith. Vigo Co., Apr. 7, in clover; one unlabelled.

17. *C. OCVLATA* var. *CHLOROPHANA* Burmeister. Tippecanoe Co., May 19, 1930, May 11.

18. *C. OCVLATA* var. *ILLEPIDA* Fitch. Tippecanoe Co., Oct. 13, 1930 (G. E. Lehker), May 17 (L. I. Musgrave*) and 24 at light, June 17, sweeping grass (A. W. T.*).

19. *C. NIGRICORNIS* Burmeister. Tippecanoe Co., 11 specimens, May 15-25, sweeping vegetation, at light, etc.

20. *C. FLORABUNDA* Fitch. Clark Co., July 15, 1931; Posey Co., Poseyville, July 11, 1929, sweeping (B. E. M.*); Tippecanoe Co., May 20, 1926, May 9, 1930, Oct. 15, 1930, at light (A. W. T.*), Nov. 12, 1930, May 5, 1931, sweeping (A. W. T.*), five specimens from Apr. 10 to Nov. 10, 1931, Apr. 21 and Oct. 1 (both by L. I. Musgrave*).

21. *C. QUADRIPUNCTATA* Burmeister. Tippecanoe Co., May 16, 1931.

22. *C. RUFILABRIS* Burmeister. Tippecanoe Co., June 28, 1928 (H. K. Riley).

MYRMELEONIDAE.

23. *DENDROLEON OBSOLETUM* Say. Clark Co., one specimen summer of 1931 and four July 18-31, 1932; Morgan Co., June 12, 1931 (L. I. Musgrave. in Coll. Roger C. Smith).

24. *GLENURUS GRATUS* Say. Green Co., July 23, 1895; Vanderburg Co., "near Evansville" (type locality), recorded by Say.¹

25. *HESPEROLEON ABDOMINALIS* Say. Clark Co., June 20, 1931; Tippecanoe Co., June 7, 1921.

26. *MYRMELEON IMMACULATUS* DeGeer. Clark Co., June 15.

ASCALAPHIDAE.

27. *COLOPTERUS EXCISUS* Hagen. Lawrence Co., near Bed-

ford, July 10, 1929, on an apple branch with the specimen of the following species of this date (J. J. Davis).

28. *ULULODES HYALINA* Latreille. Lawrence Co., July 10, 1929, with the preceding species and the two thought by the collector to be a mating pair (J. J. Davis), orchard near Mitchell, July 24, 1931 (G. E. Marshall, in Coll. B. E. M.).

29. *U. QUADRIMACULATA* Say. Clark Co., two specimens, summer of 1931 (one in Coll. Roger C. Smith).

Notes on Utah Heteroptera.¹

By GEORGE F. KNOWLTON.

This paper lists a number of species of Heteroptera not heretofore recorded from Utah and adds to the known distribution of other forms. The writer is indebted to Mr. H. G. Barber for the identification of many of the species here reported.

PENTATOMIDAE (Leach).

EUSCHISTUS ICTERICUS (Linn.). Farmington, July 23, 1930 (M. J. Janes).

COENUS DELIUS (Say). Logan, July 11, 1931 (W. L. Thomas).

NEOTTIGLOSSA SULCIFRONS Stal. Logan, August 22, 1908 (J. B. Horton); Salt Lake City, July 14, 1904.

COSMOPEPLA CONSPICILLARIS (Dall.). Soldier Creek, June, 1928 (Knowlton).

COREIDAE (Leach).

LEPTOGLOSSUS OCCIDENTALIS Heid. Blue Creek, August 17, 1931 (Knowlton, Janes); Logan, February 18, 1930 (L. Stirland); Snowville, June, 1931 (Knowlton).

L. CLYPEALIS Heid. On *Atriplex rosca* at Blue Creek, August 17, 1931 (Knowlton, Janes); Fort Duchesne, June 23, 1931 (R. L. Janes); Logan and Trenton on August 17, 1931 (Knowlton, Thomas).

ALYDUS EURINUS (Say). Logan, October 17, 1909.

A. PILOSULUS H. S. Myton, August 23, 1932 (L. Cutler).

A. CONSPERSUS Montd. Fort Duchesne, August 25, 1930 (R. L. Janes); on alfalfa at North Ogden, August 16, 1929 (H. J. Pack); Providence (Janes).

TOLLIUS CURTULUS (Stal). Logan (Knowlton).

T. SETOSUS (Van D.). Logan, July 3, 1931 (Thomas).

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